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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,539	10/24/2003	Ernest C. Chen	PD-200250	9872
20991 7590 01/04/2007 THE DIRECTV GROUP INC PATENT DOCKET ADMINISTRATION RE/R11/A109 P O BOX 956 EL SEGUNDO, CA 90245-0956			EXAMINER WILLIAMS, LAWRENCE B	
			ART UNIT	PAPER NUMBER
			2611	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
2 MONTHS		01/04/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/692,539	Applicant(s) CHEN, EMEST C.	
	Examiner Lawrence B. Williams	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8, 17 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 9-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the tuner and ADC of claim 1, and means for tuning and means for capturing of claim 17 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities:

a.) The phrase “new receiver of uses two” in line of page 14 is unclear.

Appropriate correction is required.

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

4. Claim 9 is objected to because of the following informalities:

a.) The examiner suggests “acquiring and tracking” instead of “acquire and track” in line

4.

b.) The examiner suggests “determining” instead of “determine” in line 6.

Appropriate correction is required.

Allowable Subject Matter

5. Claims 1-8, 17 are allowed.

6. Claims 9-16 would be allowable if rewritten to overcome the objections cited above.

7. The following is a statement of reasons for the indication of allowable subject matter: the instant application discloses a system and method for measuring phase noise. A search of prior art records has failed to teach or suggest:

“ a system for measuring phase noise, comprising: a tuner for tuning a signal from a device and converting the signal to a baseband at least one analog-to-digital converter (ADC) for capturing data from the baseband a timing processor for acquiring and tracking symbol timing of the captured data of the baseband signal; a carrier processor for determining unwrapped phase history data from the tracked symbol timing; a line fitting processor for determining a linear phase by fitting a straight line to the unwrapped phase history data; and a subtractor for subtracting the linear phase from the phase history data to produce a residual phase of the carrier” as disclosed in claim 1.

“a method for measuring phase noise, comprising the steps of tuning a signal from a device and converting the signal to a baseband signal; capturing data from the baseband signal; acquire and track the captured data of the baseband signal to determine symbol timing tracked data; determine unwrapped phase history from the symbol timing tracked data; fitting a straight line to the unwrapped phase history data to determine a linear phase; and subtracting the linear phase from the phase history data to produce a residual phase of the signal” as disclosed in claim 9.

“a system for measuring phase noise, comprising: means for tuning a signal from a device and converting the signal to a baseband means for capturing data from the baseband signal; means for acquiring and tracking symbol timing of the captured data of the baseband

Art Unit: 2611

means for determining unwrapped phase history data from the tracked symbol timing; means for determining a linear phase by fitting a straight line to the unwrapped phase history data; and means for subtracting the linear phase from the phase history data to produce a residual phase of the signal” as disclosed in claim 17.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a.) Chen discloses in US 2006/0013333 A1 Maximizing Power and Spectral Efficiencies For Layered and Conventional Modulations.

b.) Pearson discloses in US 2002/0075951 A1 Method and Apparatus To Measure Jitter.

c.) Inkol discloses in US Patent 5,363,103 Method For Evaluating Similarity of Signals Having a Carrier Frequency Offset.

d.) Yamaguchi et al. discloses in US Patent 6,922,439 B2 Apparatus For And Method Of Measuring Phase Jitter.

e.) Berggren et al. discloses in US 2002/0064244 A1 Phase Noise Tracker With A Delayed Rotator.

f.) Chen et al. discloses in US 2006/0153315 A1 Lower Complexity Layered Modulation Signal Processor.

g.) Mar et al. discloses in US Patent 7,035,324 B2 Phase-Noise Measurement With Compensation For Phase Noise Contributed By Spectrum Analyzer.

9. This application is in condition for allowance except for the following formal matters:
- a.) Drawing objections as cited above.
 - b.) Specification objections as cited above.
 - c.) Claim objections as cited above.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence B Williams whose telephone number is 571-272-3037. The examiner can normally be reached on Monday-Friday (8:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ghayour Mohammad can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

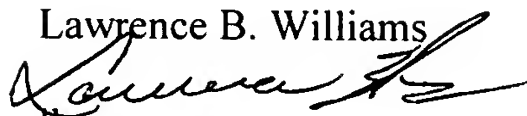
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/692,539

Page 7

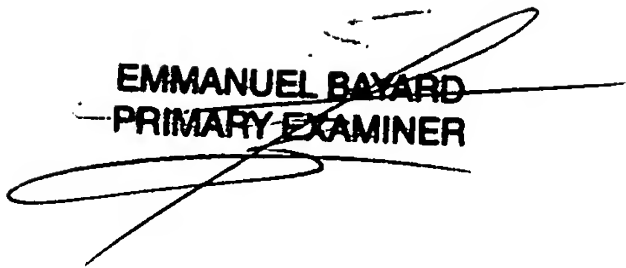
Art Unit: 2611

Lawrence B. Williams



lbw

December 21, 2006



EMMANUEL BAYARD
PRIMARY EXAMINER